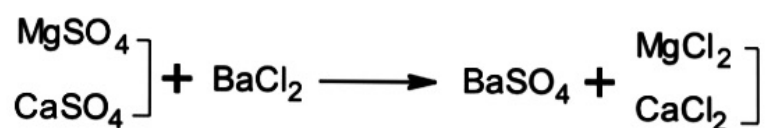
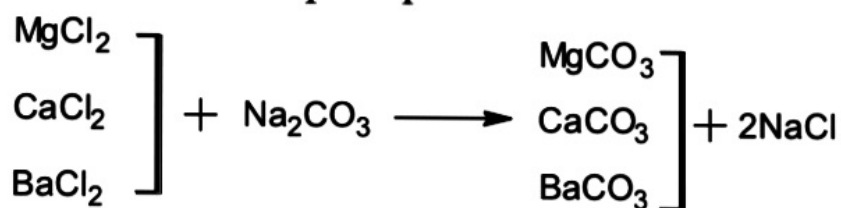


Procedure

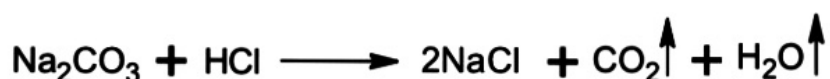
1. Dissolve (1g) of Crude salt in (10) ml of Distilled water in a beaker.
2. Filter the solution and put the filtrate in a small beaker, then add drops of Barium chloride solution (2%) to the solution, observe the appearance of precipitate.
3. Filter the solution and put the filtrate in another beaker, repeat this step till no precipitate is formed.



4. Add sodium carbonate solution (5%) to the filtrate, observe the precipitation formation if precipitate formed then filter the solution.



5. Add few drops of diluted HCl (0.2M) to the filtrate to neutralize it using pH paper as indicator.



6. Evaporate the solution in a pre-weighted beaker using a mild heat source till pure crystals of NaCl appears.
7. Weight the yield then calculate the percentage of pure salt.

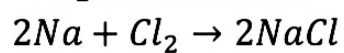
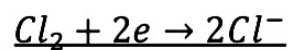
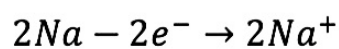
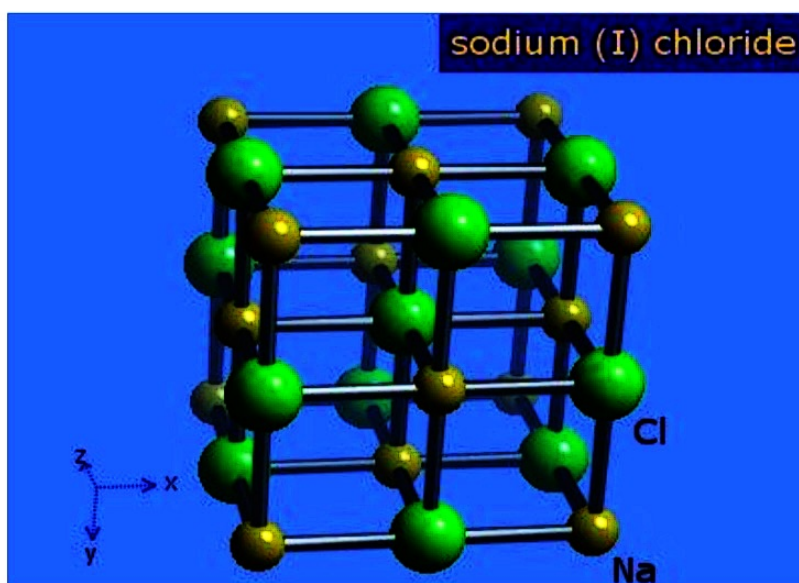
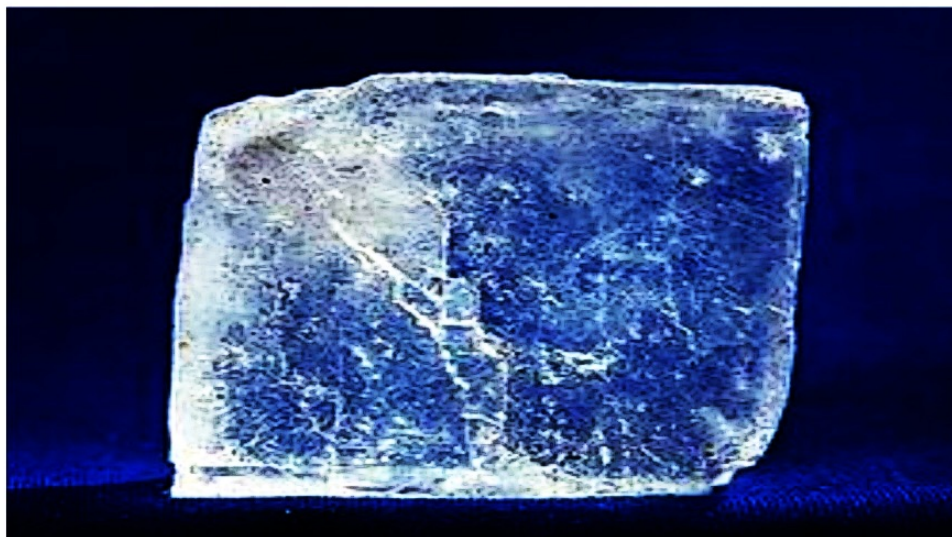
$$\text{Percentage of Pure NaCl} = \frac{\text{Mass of pure NaCl}}{(1)g} \times 100$$

Question:

1. Why BaCl₂ and Na₂CO₃ are used? Explain with chemical equation.
2. Potassium carbonate cannot be used instead of sodium carbonate? Why? Explain with chemical equation.
3. Explain why the percentage of pure NaCl increases in the last step, with equation.
4. Give the properties of NaCl.
5. Write the equations of this reaction.

Experiment No. (1)

Purification of Sodium Chloride NaCl



The Reagents Required:

1. Crude salt (1g)
2. BaCl_2 solution 2%
3. Na_2CO_3 solution 5%
4. HCl solution (0.2M)